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ABSTRACT

To guide personnel in establishing appropriate gifted/talented programs in small, rural secondary schools, this bibliography provides annotated citations for 29 journal articles and books published from 1968 to 1986 which examine all aspects of gifted education. Annotations are divided into 4 sections: the current status of gifted education in rural communities (6 annotations); program and curriculum options for rural secondary schools (19); research regarding teachers of the gifted (4); and effects of classroom climate on self-concept, creative thinking, and attitudes of gifted secondary students (10). Annotations in the program section are subdivided into the areas of general literature (4 annotations), acceleration (8), independent study (3), mentor programs (3), and seminars (1). A separate bibliography lists sources alphabetically by author. A summary, conclusions, and recommendations are also provided. Recommendations suggest that school personnel should seek community involvement to ensure support, teachers should use acceleration to fit pace to the student's ability, staff should use independent study for individualizing curriculum or when small numbers do not warrant a class, and administrators should assign teachers to gifted classes who feel most comfortable acting in the role of facilitators of learning. (NEC)

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AN ANNOTATED BIBLIOGRAPHY RELATED TO ESTABLISHING A GIFTED AND TALENTED PROGRAM AT THE SECONDARY LEVEL WITH CONCENTRATION ON SMALL, RURAL SCHOOLS

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INTRODUCTION

As anyone in education has learned to expect, the field has periodically embraced a trend or area where much funding, research and in-service is focused for a period of time. The trend that has currently occupied many school systems time and energy (or has been adopted by them because of state or federal funds) has been gifted and talented education (G/T). This came about after the swing towards special and remedial education brought to light the need for programs at the opposite end of the academic spectrum (Fazzini). Besides this fact, many believed Public Law 93-380 responded not only to mentally and physically handicapped but to the mentally gifted as well (Fazzini).

STATEMENT OF THE PROBLEM

Secondary personnnel not currently involved with G/T programs may find themselves faced with students who expect differentiated lessons. This can happen because students may have been identified and instructed at the elementary in G/T courses, where program implementation has been much more prevelant (Feldhusen & Reilley). At the secondary level however the maze of scheduling and state requirements has made blocks of time almost impossible to create (Pitts), especially at small high schools, where many courses are only offered once a day.

These reasons have contributed to why G/T programs seem to be well established at the elementary level and options have just begun to be implemented at secondary schools (Feldhusen & Reilley). As more students go through elementary G/T programs it would seem logical that the need for appropriate secondary G/T curriculum be addressed, and educators are faced with the problem of meeting this need.

PURPOSE OF THE STUDY

The problem of establishing appropriate G/T programs at the secondary school needs to be addressed, but without forgetting that the needs of each school may be different (Bullerdieck). "It [P.L. 93-380] is equally applicable to the mentally and physically advanced since those students share the same problems of social adjustment, inappropriate classwork and inefficient use of their portion of the tax dollar."(Fazzini 16) Just as mainstreaming has become a reality of the secondary classroom teacher, so has gifted education. It is the purpose of this paper to explain through an examination of the literature the current status of gifted education, especially in rural communities, the program options available to these areas, the characteristics of teachers of the gifted, as well as a brief look at some attitudes of the gifted secondary student.

ORGANIZATION AND LIMITATIONS OF THE STUDY

The annotations in this study will be divided into several sections: The current status of gifted education in rural communities, Program and curriculum options for rural secondary schools, Research regarding teachers of the gifted and effects of classroom climate on self-concept, creative thinking and attitudes of gifted secondary students. The program section will be divided into the areas of general literature, acceleration, independent study, mentor programs and seminars.

The majority of the research used for this project will be focused on that research applying to small, rural secondary schools even though the studies themselves may have broader scopes. For this reason many urban programming options will not be reviewed.

Glossary

Acceleration-"Educational efforts that expose a student either to higher levels or to faster paced instruction than is normal for ...grade level" (Feldhusen, Toward Excellance...)

Enrichment-"incorporating additional material or activities into into an existing curriculum" (Feldhusen, Toward Excellance...)

Creativity-"suggests that a person can produce new, novel or different ideas" (Feldhusen, Toward Excellence...)

Gifted-"a child or adolescent who shows signs or indications of superior ability" (Feldhusen, Toward Excellence...)

Precocious-"child or adolescent who can perform at a higher level than expected for his or her age" (Feldhusen, Toward Excellence...)

Talent-"implies a particular area of giftedness, such as artistic talent or mathematical talent" (Feldhusen, Toward Excellence...)

Intelligence-"cognitive capacities (the ability to think well, solve problems, and use logic)" (Feldhusen, Toward Excellence...)

Mentor-"a person the child admires, who provides a role model in some area of human endeavor and who serves both to stimulate and respect the child" (Feldhusen, Toward Excellence...)

ANNOTATIONS

CURRENT STATUS OF GIFTED EDUCATION IN RURAL COMMUNITIES

Mitchell, Bruce M. "An Update on the State of Gifted and Talented Education in the U.S." PHI DELTA KAPPAN 63 (1982): 57-58.

This survey reported on attitudes of administrators toward gifted and talented education. Support for programs was increasing nationally, while curriculum content and state certification requirements were the major concerns. Wisconsin and New Hampshire were the only states reporting no G/T programs. This report showed the wide-spread nature of gifted and talented education.

Feldhusen, John and Patricia Reilley. "The Purdue Secondary Model for Gifted Education." Journal for the Education of the Gifted 6 (1983): 230-244.

Feldhusen and Reilley referred to Gallagher's survey (1983) of the state of gifted education to discuss programs and funding of the 34 states reporting. Fourteen states provided 80-100% of the programs support, while 20 states contributed less. This survey also showed most programs existed at the upper elementary level (55%). The primary level made up 10%, while the junior and senior highs combined had 35% of the programs reported. The report also explained the eleven areas included in the Purdue Three Stage Model: Counseling, Placement, Arts, Career education, Foreign language, Vocational programs, Math and science, acceleration, Honors classes, Seminars, Culture studies and Extra school activities. The authors closed with a strong recommendation to establish solid curriculums in programs from the beginning.

Perkins, Shirley. "Policy Issues in Gifted Education: Are They Too Restrictive?" NASSP Bulletin, Sept. 1985, 12-15.

Perkins looked at the problems of policy that have emerged since a study of the education of the gifted and talented in the United States was congressionally mandated in the early 70's. The biggest problem seen by Perkins was the "Secondary shift." The shift involves the significant reduction in the number of students served at the secondary level compared with the elementary. Another problem identified was the change in program objectives and content between the two. Little policy making in the 70's dealt with curriculum issues, stated Perkins, and this has led to poor matches between programs and students when they move from elementatary to secondary school programs.

Yoder, Jan. "Gifted Education is for Rural Students Too." NASSP Bulletin, Sept. 1985, 68-74.

A recent survey of gifted programs in Iowa found that more than one-third of the programs are in districts with fewer than 600 students. Yoder briefly summarized the various aspects of some of these programs and stressed the flexibility and accessibility of program options for small schools. These options included: mentor programs, Advanced Placement programs (some using televised lessons), summer enrichment programs and academic competitions. Yoder stressed that location, resources, lack of funds, and limited faculty were problems cited by most of these rural districts, but many now had programs in place.

Pitts, Mark. "Suggestions for Administrators of Rural Schools About Developing a Gifted Program." Roeper Review 9.1 (1986): 24-25.

This article identified problems associated with creating a gifted program in rural schools. He stressed making the most use of limited time, personnel and facilities, and he stressed objectivity in the identification process, because of the small communities. Designing a program to fit local needs was urged and to include community members to ensure local support. Last of all he suggested that the written material for the program be screened by a resident (non-educator) to ensure understandibility.

Bullerdieck, Kelly McKerrow. "All That Glitters is Not Gold." G/C/T 36 (1985): 10-11.

This author cited the lack of research pertaining to the rural gifted student and maintained that exposure to urban culture was not necessarily the best gifted program for the rurally talented. That idea insinuated that urban was better, contended Bullerdieck, and that was a prejudiced perspective. Also stressed was the idea that any program, no matter where, must consider the viewpoint of the community or be doomed to fail. Citing several authorities in this field, this author maintained that rural communities had unique resources and resource persons and that "thinking" by students in a program should be the main consideration.

Feldhusen, John, ed. Toward Excellence in Gifted Education. Denver, Colorado: Love Publishing Co., 1985.

This book was co-written by six authors whose purpose was to motivate educators in the field of gifted education to look at: the rationale for their programs, the identification proceedures, the curriculum and the overall goals. They felt many existing programs (pull-out, resource room models especially) were not meeting the needs of the gifted. They felt learning basic skills and concepts in subject areas at a pace and level that matched the individual student's ability was the most important need. Other major needs stressed were interdisciplinary study, career education, better self-understanding and learning another language. They recommended accelerated learning in the basic disciplines through seminars, honors classes and Advanced Placement classes as the ideal avenue for secondary education.

Fazzini, Ann, Robert Glaser and Ramond Kley. "Mainstreaming the Gifted on a Shoestring." American Secondary Education 11.2 (1981): 16-17.

A case study of the Stewart Junior High School program implementation was the focus of this article. A need for the program stemmed from Public Law 93-380, which the school felt included the gifted as well as the handicapped. Planning began with an interdisciplinary team of teachers, who decided to treat their G/T program as a special service like reading or speech. They cited teachers in-service as important. After indentification, each student met with the teacher/coordinator to plan a project and locate a mentor, who then graded the students. Students also met for twenty-five minutes daily as a study hall and a time for peer-interaction, which the school felt was necessary.

Feldhusen, John F. "A New Conception of Giftedness and Programing for the Gifted." Illinois Council for the Gifted 5 (1986): 2-6.

Feldhusen contended in this article that schools were too narrow and only identified the academically gifted. He felt schools needed to broaden their ideas of giftedness to include services for the artistic and vocationally gifted. Appropriate programs to meet G/T students needs must be multi-service in nature he argued, citing research of Goodland and Sizer (1985), who observed over 1000 classrooms. Along with multi-services, Feldhusen recommended special guidance counseling and a specific planning instrument such as an Individual Educational Plan (IEP).

Passow, Harry A. "Curriculum for the Gifted and Talented at the Secondary Level." Gifted Child Quarterly 30.4 (1986): 186-191.

Just as with any curriculum, Passow contended that programming for the gifted begin with clear program goals and objectives and must be concerned with content as well as scope and sequence, integration, balance and also consider resource use, time, space and organization. Rather than some isolated honors courses, gifted education must include the total learning environment stated Passow. Several successful secondary program option were sighted and supported by this author: Columbia University's Saturday Science Program (in operation for thirty years), Westinghouse Science Talent Search, OM (formerly Olympics of the Mind) and Advanced Placement.

Acceleration

Stanley, Julian C. "The Predictive Value of the SAT for Brilliant Seventh and Eighth-Graders." The College Board Review 106 (1977-78): 31-37.

The article summarized the four talent searches conducted since 1971 by the Study of Mathamatically Precocious Youth (SMPY) at John Hopkins University. The author maintained that it was evident (he cited many case studies) that the SAT-mathematical scores were effective for identifying 12 and 13 year old youths who reason well and for predicting their success when they are accelerated educationally. The author defended the use of the SAT tests (both math and verbal scores) as an identifier and predictor because researchers could learn more about students sooner: the Stanford-Binet score of high IQ, according to the author, did not necessarily mean great mathematical reasoning ability, but a high sat-math score did. Stanley strongly advocated academic acceleration after identification based on the cases of students in the past talent searches.

---------. "How Did Six Highly Accelerated Gifted Students Fare in Graduate School." Gifted Child Quarterly 29.4 (1985): 180.

This article reported follow-up information on six very young college graduates (15-18). The purpose was to prove "early ripe-early-rot" was clearly not the case after rapid acceleration. Five have received Ph. D.'s in difficult subjects five to eight years earlier than was usual and obtained positions at excellent universities. The sixth is still a doctoral student. This report further supports acceleration as a program option.

———————. "A Baker's Dozen of Years Applying All Four Aspects of the Study of Mathematically Precocious Youth (SMPY)." Roeper Review 7.3 (1985): 175-174.

This article was an overview of the 13 year study, which began at John Hopkins University in 1971. It discussed how the program had expanded from serving 19 local 7th graders to a national program with 1600 students enrolled. The author gave four "D's" which have guided the program: discovery of the youth, description of characteristics of the very apt (mathematically or verbally since 1976), development of special education for these young people and dissemination of the principles and programs developed by SMPY. This report supported the idea that gifted education has been expanding and that acceleration can been based on long-term research.

———————and Ann McGill. "More About Young Entrants to College: How Do They Fare?" Gifted Child Quarterly 30.2 (1986): 70-73.

This study reported on 25 educationally accelerated entrants to John Hopkins University. It supported the ability of students who enter college early (2-5 years) to make good grades, win honors and graduate promptly. Twenty-three of the 25 graduated on time or earlier. The group had a mean G.P.A. of 3.33 and made the Dean's List 39 percent of the time. Findings of the study indicated that students who enter college full-time earlier, but well-prepared academically, can do very well. These authors recommended that the early entrant have higher SAT-verbal and math scores than the average freshman in the college or university of their choice.

Kulik, James A. and Chen-Lin C. Kulik. "Effects of Accelerated Instruction on Students." Review of Educational Research 54.3 (1984): 409-425.

This article presented results from a meta-analysis of findings on the effects of accelerated instruction on elementary and secondary students. The data included 26 controlled studies. The results showed that exam performance of accelerates surpassed the performance of nonaccelerates by nearly one grade level. Exam scores of accelerates were equivalent to those same-grade but older, talented nonaccelerates. The authors cited their disappointment in the failure to shed any light on the aspects that make some accelerated programs more successful than others.

---------. "Synthesis Research on Effects of Accelerated Instruction." Educational Leadership, Oct. 1984, 84-89.

While repeating much of the same research as the above article, this report also dealt with the issue that while the research has proved acceleration to be effective for gifted students, opponents agrued that it was elitist and created a sense of inferiority in those left behind. The authors hoped with this article to make the research clear about acceleration for the "educational policymakers," so this method of gifted education would not continue to be ignored in the face of so much favorable research.

Karnes, Francis A. and Jane C. Chauvin. "A Survey of Early Admission Policies for Younger Than Average Students: Implications for Gifted Youth." Gifted Child Quarterly 26.2 (1982): 68-73.

Citing several research studies from the 50's, 60's and early 70's, these authors explained the reasons for their study on early admission into college of gifted youths. They maintained all past studies (Fund for the Advancement of Education, 1957; The Carnegie Commission, 1971 and the White House Conference on Youth, 1971) showed evidence that acceleration was actually advantageous for the intellectually superior student. Their purpose was to see if evidence still supported this position. This study was done using the survey method of 190 four-year institutions as to admission requirements, housing, scholarships and counseling. The authors cited the work of Dr. Julian Stanley at John Hopkins University (1979), pointing to the fact that early entrants to college maintained good academic records and suffered little social maladjustment as previously feared. Dual enrollment in both high school and college was also discussed as an option revealed by the study.

Janos, Paul M. and Nancy M. Robinson. "The Performance of Students in a Program of Radical Acceleration at the University Level." Gifted Child Quarterly 29.4 (1985): 175-179.

This article focused on the University of Washington's EEP Program (Early Entrance Program). The study compared academic performances of 24 radically accelerated students (mean age at maltriculation = 14 years) with those of 24 average age college students with comparible aptitude test scores and 24 college students who were National Merit Scholars. Accelerated students earned cumulative grade point

averages comparable to those earned by National Merit Scholars and much higher than the college students with the same pre-entry aptitude test scores. This group was also more satisfied with the academic environment of the university than the other two groups. The author stated that this research supported the conclusions of other research in regard to acceleration.

Independent Study

Reis, Sally M., George C. Atamian and Joseph S. Renzulli. "The Effectiveness of the Self-Instructional Curricular Unit in the Development of Advanced Level Concepts in Astronomy." Gifted Child Quarterly 29.4 (1985): 151-154.

After several identification steps, 5th and 6th grade students chosen worked with various scientific equipment and an astronomer. One of the most important aspects of the research according to the authors was the manner in which the process skills in data gathering and recording were achieved. They believed this approach was the best for the learning of highly technical material and represented the best combination of delivering content, application and respect for students abilities. They also hoped this study would encourage other teachers of the gifted to work with experts in various fields.

Lodato, Francis. "Final Report on the Independent Study Program for the Academically Able." Education Resource Information Center ED 025 810 (1968): 1-36.

This report evaluated the released time from classes for independent study by gifted students after a four year study. The major areas of concern for the study were high school achievement and later college performance by the students. Results showed that the absences from class for independent study had no adverse effects on grades, in fact the experimental group gained more in the areas of library skills, study habits and satisfaction with school. Also, significantly more experimental students chose majors in their freshman year in college than did the control group. All in all, the study gave positive evidence in support of independent study.

Whaley, Charles E. and Helen F. Whaley. Future Images: Future Studies for Grades 4 to 12. New York: Fullum Press, 1986.

The Whaley's saw independent study as the area where students used their knowledge of problem solving incorporated with their critical and creative thinking skills. While the teacher served as a facilitator, students selected a topic, narrowed it, researched it, produced and presented a product demonstrating their results. Students then evaluated themselves on their process and product. The authors stressed that independent study could conform to the needs of individual learning situations or a specific population of students. They included the format for independent study developed at Purdue University by Penny Kolloff and John Feldhusen, and they recommended and included some sample contracts.

Mentor Programs

Bova, Breda Murphy and Rebecca Phillips. "Study of the Mentor Relationships." American Secondary Education 12.1 (1982): 29-30.

This article explained a study done at the University of New Mexico that investigated the mentor-protege relationship. Questionnaires were administered to 160 professional men and women. Findings revealed that men have a greater tendency to mentor men than women, and it outlined the features of mentor relationships, as well as gave a profile of a mentor. The conclusion drawn by the authors was that all students could benefit from such experiences, and that it had been realized that students in a gifted program could be making serious career choices sooner and mentor programs could be helpful to these students.

Ellingson, Mary K., Walter W. Haeger and John F. Feldhusen. "The Purdue Mentor Program." G/C/T 9.2 (1986) 3-5.

A description of the first two years of the Purdue Mentor Program was the focus of this article. Proteges for this program were selected from students enrolled in Purdue's Super Saturday Program. Teacher's then recommendedstudents on the following characteristics: ability to work independently, self-motivation and ability to work one-on-one with an adult. The author stressed that the Gifted Education Resource Institute at Purdue planned to continue offering the mentor program because it was felt to be an effective alternative for gifted education.

Shamanoff, Gloria A. "The Women Mentor Project: A Sharing Approach." Roeper Review 7.3 (1985): 163.

The author discussed this pilot model mentor program which was used in the Fort Wayne Community School's Horizons-Gifted Program. It was implemented at one elementary, five middle and three senior high schools during 1982-83. The projects goal was to provide gifted girls role models to help develop self-esteem, leadership and career awareness. The author cited the on-site protege visitation as the most beneficial mentor activity. At the time the article was written the program had been expanded to include 15 more schools.

Seminar

Kolloff, Penny and John Feldhusen. "Seminar: An Intructional Approach for Gifted Students." G/C/T 9.5 (1986): 2-7.

A variety of services are needed for gifted youth and should be included in a G/T program according to Kolloff and Feldhusen. They felt the characteristics of gifted students matched well the characteristics of the seminar. "The interdisciplinary and conceptual nature of the gifted learner suggests that dealing with abstract ideas at a high level of complexity is an appropriate learning process for the gifted student." The remainder of the article gave descriptions of seminars currently being implemented at several Midwestern high schools. They cautioned however, for this option to work as intended, the seminar must operate with high levels of expectation and challenge.

RESEARCH REGARDING TEACHERS OF THE GIFTED

Story, Carol A. "Facilitator of Learning: A Micro-Ethnographic Study of the Teacher of the Gifted." Gifted Child Quarterly 29.4 (1985): 155-158.

Reviewing extensive research on the characteristics of teachers of the gifted, Story determined the most often designated characteristic was that they be facilitators of learning. In her study an ethnographic method (participant observation and interviews) of research was used. Six subjects were randomly selected from a pool of 12 teachers twice nominated by leaders in the field as having exhibited behavioral characteristics necessary for the teaching of the gifted. These six were then observed in two phases during their roles as facilitators of independent study. Six catagories of behaviors with supporting properties were established.

Feldhusen, John F. "The Teacher of the Gifted." Gifted Education International 3.2 (1985): 87-93.

Feldhusen discussed the relevant research regarding teachers of the gifted. Research was presented regarding characteristics of these teachers as well as a table of needed competencies of these teachers ranked in the order of importance by 140 university personnel and practitioners. Training of teachers was also discussed. Recommendations for teacher training were presented from the task force findings of The Professional Training Institute of The National Association for Gifted Children (1983). Recommendations covered college courses, in-service training and teacher certification.

Cramond, Bonnie and Charles E. Martin. "Inservice and Preservice Teachers' Attitudes Toward the Academically Brilliant." Gifted Child Quarterly 31.1 (1987): 15-19.

This study used a questionnaire developed by Tannenbaum (1962) to examine the attitudes toward the academically gifted of 83 experienced teachers and 100 junior and senior education majors. The characteristics of athleticism, diligence and academic brilliance were examined. Attitude correlates were defined as scholastic achievement, sex, and previous teaching experience of the rater. Results indicated that experienced teachers and future teachers, just like in Tannenbaum's study (1962), viewed athleticism as the critical determinant of a person's likability. The authors reported that for whatever reasons, teachers in the study did not value academic brilliance above the other qualities in a student.

Maddux, Cleborne D., Ina Samples-Lachmann and Rhoda E. Cummings. "Preferences of Gifted Students for Selected Teacher Characteristics." Gifted Child Quarterly 29.4 (1985): 160-163.

The purpose of this study was to determine the preferences of a group of identified gifted children in the United States for certain teacher characteristics and compare them to an earlier study of children in Israel. Ninety-eight gifted students in grades 7-9 judged the importance of selected teacher characteristics in personal-social, cognitive and classroom management domains. These gifted students were found to prefer personal-social characteristics over cognitive or classroom management characteristics. The authors stated that the study may have tentative implications for preservice and in-service teacher education in gifted and talented education.

GIFTED STUDENTS ATTITUDES, EFFECTS OF CLASSROOM CLIMATE ON SELF-CONCEPT AND CREATIVE THINKING

Steele, Joe Milan et al. "Instructional Climate in Illinois Gifted Classes." Education Resource Information Center ED 043 990 (1970): 1-62.

The Class Activities Questionnaire (CAQ) was administered to 3,138 students for this study to evaluate the Illinois program for the gifted. The CAQ contained thirty items evaluating lower thought processes, higher thought processes, classroom focus, classroom climate, and student opinions. The questionnaire revealed significant differences between average and gifted classes in the degree of emphasis on higher thought processes, synthesis, enthusiasm and independence.

Williams, Andrea T. "Academic Game Bowls as a Teaching/Learning Tool." G/C/T 9.1 (1986): 2-4.

Williams cited the National Academic Games Project Director, Robert W. Allen's defense for using academic games for learning in his article. Allen used test results reported by John Hopkins University (1972). On a divergent solution test, an experimental class playing academic games obtained a posttest score almost double their pretest score, while the control group showed no gain. Williams reported results of school districts who had implemented academic games as part of their G/T programs. The students in the districts had begun to look upon their academic teams with the same pride given to their athletic teams. This article supported the idea that academic game competition can build self-concepts of gifted youths.

Kolloff, Penny Britton and John F. Feldhusen. "The Effects of Enrichment on Self-Concept and Creative Thinking." Gifted Child Quarterly 28.2. (1984): 53-57.

This study used 420 identified gifted students, who were assigned to either experimental or control groups. The results confirmed the effectiveness of creativity training. The study also supported the effectiveness of the enrichment program based on the Purdue Three-Stage Model. The authors believed that creative thinking abilities could be developed through enrichment experiences. The study showed this could be accomplished with no significant change in self-concept.

Feldhusen, John F. and Donald Treffinger. Creative Thinking and Problem Solving in Gifted Education. Dubuque, Iowa: Kendall/Hunt Publishing Co., 1977.

The first purpose of this book was to help teachers teach student to think creatively to solve problems. Feldhusen felt that creative thinking and problem solving were personal experiences that thrived in open classroom climates. The second purpose was to inform teachers about materials, methods and techniques for teaching creative thinking in their classsrooms.

Gallagher, Shelagh A. "A Comparison of the Concept of Over-excitabilities with Measures of Creativity and School Achievement in Sixth-Grade Students." Roeper Review 8.2 (1986): 115-116.

This was an investigation comparing twelve gifted and twelve randomly selected 6th grade students to determine the relationship between scores on the Torrance Test of Creative Thinking, The California Achievement Test and levels of excitability. The author cited the possible connection between areas of giftedness as the most promising part of the theory; intelligence and creativity may be separate but equal avenues of expressing giftedness. The author hoped future work may identify how intellect, creativity, leadership and other kinds of giftedness are alike, not different.

Hansen, Jan B. and Eleanor G. Hall. "Self-Concept Gains by Gifted Middle School Students During a Summer Program." Roeper Review 7.3 (1985): 170-172.

The article was a report of a study conducted at the University of Wisconsin during a Summer Gifted Student Institute (GSI). It was conducted to determine if there was any relationship between the two-week program and the self-concept of the 37 middle school students. The Me Scale (Feldhusen) and the Self-Esteem Inventory (Coopersmith) were given the first and last days of the program. The results showed that homogeneously grouped students did experience improvements in self-concept as measured by the scales. Student sample writing supported this finding. The authors recommended further research using control and experimental groups larger than 37 to substantiate their hypothesis.

Boyd, R. M. "Talented Pupil's Transition from Primary to Secondary Schooling Unit for Child Studies-Selected Papers Number 11." Education Resource Information Center ED 212 383 (1981): 1-14.

In 1979 and again in 1981, two groups of 87 students were identified as academically talented and completed questionnaires about their adjustment to high school and their expectations, respectively. Results from the studies indicated that academically talented students had problems adjusting to the new environment, but that they entered high school with high expectations for challenging work. Other social attitudes of the gifted emerged from the study; they appeared to be more tolerant of individual differences and less inclined to accept without question the authoritarian statements that are common in society.

Gallagher, James J. "The Influence of a Special School on Cognitive Style and Attitudes of Gifted Students." Education Resource Information Center ED 026 750 (1965): 1-118.

Influences of university attendance on cognitive and attitude levels of gifted secondary students were identified in this study. A self-concept scale (Guilford) and an attitude-scale (Coleman) were given to 249 laboratory and secondary school populations. Few cognitive differences were found, as well as little difference in self-concept. Several attitudinal differences however were noted: lab-school students felt less a need to be part of a crowd and adopted more liberal positions on political issues. Further, in the lab, a greater number of students expressed negative feelings about school or about their abilities to do well. These findings did not support one environment more than another but suggested that closer attention be focused on the attitude-shaping role played by the school environment.

Mattews, Neil F., John D. West and Thomas W. Hosie. "Understanding Families of Academically Gifted Children." Roeper Review 9.1 (1986): 40-42.

This was a study of 125 families of students enrolled in a university sponsored summer program for the academically gifted. It examined to what extent these families exhibited healthy interaction behaviors. Scores were compared to 218 individuals from an earlier study (Epstein, Baldwin & Bishop, 1983). The study looked at variables that appeared influential in the development of gifted children. These families seemed to be adept at implementing the problem-solving process, using direct communication, developing roles to fulfill family functions and expressing standards of behavior for family members. The authors surmised that some literature may be misleading in assuming that treatment for most gifted families of gifted students is needed.

Craver, Kathleen W. "The Use of Library Materials and Services by Gifted Students." Roeper Review 9.3 (1987): 162-166.

A library use survey was conducted with 220 gifted students at University High Laboratory School at the University of Illinois for this study. Fingings indicated that gifted students used the library often for both recreational and informative reasons. It also revealed that the students were generally satisfied with materials they found, and perhaps most importantly the survey revealed the gifted students to be avid readers who viewed television less than non-gifted students.

SUMMARY

With only two states, as of 1982, (Mitchell) not having organized programs for the gifted and at least 34 states partially funding existing programs (Gallagher), it appeared through research that education of the gifted was a national issue. With 65 percent of all programs at the elementary level and only 35 percent at the secondary level, the problem arose of what to do with the gifted students when they reached the secondary level (Feldhusen & Reilley). There was a significant reduction in the number of secondary students served, compared to elementary students, as well as a large change in the program objectives, which lead to mismatched programs and students (Perkins). This problem was compounded in rural areas where location, size, resources, lack of funds and limited faculty were cited as problems (Yoder). Rural areas, as noted by Bullerdieck, were being expected to settle for exposure to urban culture as their G/T programs. To avoid this several authors suggested that these rural areas be sure to use their unique resources and persons in their programs, as this would also ensure community involvement and therefore continued support (Pitts, Yoder, Bullerdieck).

Program options for the secondary schools were varied and many were adaptable to rural settings (Yoder). According to Feldhusen (1986) schools needed to expand their

definition of gifted beyond academically gifted to include artistic and vocationally gifted. Clear goals and needs of the gifted in any program were seen as primary objectives to creating appropriate curriculum (Passow). In Toward Excellence in Education, Feldhusen went so far as to say that learning basic skills and concepts in subject areas, at a pace and level appropriate for the individual students ability was the most important need (xiv).

This idea coincided with the conclusions of a large body of research consulted, that dealing with academic acceleration. Dr. Julian Stanley's Study of Mathematically Precocious Youth (SMPY), at John Hopkins University in progress since 1971, provided evidence that SAT-math and verbal scores could identify and predict success of gifted youth (1977-78). Follow-up studies of these students led to the recommendation that accelerates have SAT-math and verbal scores above the average freshman in the college of their choice (Stanley & McGill). Although research consulted did not yeild information on the qualities of accelerated programs that made some more successful than others, a meta-analysis of 26 studies showed that exam performances of accelerates surpassed that of nonaccelerates by nearly one grade level.(Kulik, "Effects of Acceleration...") Even with all the positive research, it was noted that acceleration wasd not favorably accepted as an option in many gifted programs (Kulik, "Synthesis of Research..."). When given the opportunity to accelerate, as students were at John Hopkins

and The University of Washington, early entrants maintained good academic records (Karnes & Chauvin) and earned cumulative grade point averages comparable to National Merit Scholars (Janos & Robinson)..

Independent study was seen as another viable option for gifted programs because no adverse effects were noted after absences from class by the participant due to the independent work (Lodato), and students who were participants improved in study and data gathering skills (Reis, Atamian & Renzulli, Lodato). Another positive aspect of this option was that it was very flexible and able to conform to many learning situations (Whaley & Whaley) A significant number of students in the experimental group of Lodato's study also chose majors in their freshman year before the control group.

Two other program options for gifted education considered were mentor programs and seminars. One study revealed men tended to mentor men (Bova & Phillips), which supported Fort Wayne School System's approach of implementing a women mentor program (Shamonoff). Mentor programs were seen as beneficial either because of their career education benefits (Bova & Phillips) or their self-esteem building value (Shamonoff). The seminar situation could be considered an extension of the independent study approach (Whaley & Whaley). Kolloff and Feldhusen saw the option as very compatible to the gifted learner who can deal with abstract concepts at a high level of complexity (1986). The seminar's success was seen as dependent on the teacher keeping high

expectation and challenge levels (Kolloff & Feldhusen).

This idea raised the next point-teachers of the gifted. Those who should teach the gifted had specific characteristics (Feldhusen, Story). After reviewing research, Story determined the most often disignated characteristic of teachers of the gifted was that they be facilitators of learning. Recommendations for training these teachers included: college courses, in-service training and teacher certification (Feldhusen, "The Teacher..."). When gifted students were surveyed in regard to teacher characteristics, they preferred personal-social characteristics over classroom management or cognitive skills (Maddux, Sample-Lachmann & Cummings)

Several studies on secondary students attitudes, self-concepts and habits were used to complete this overview of secondary gifted education. Students did feel that there was a difference between gifted and average classes in the areas of higher thought processes, enthusiasm and feelings of independence (Steele). The advent of game bowl and academic competitions were also shown to boost self-concepts and test scores (Williams). While one study showed that gifted students had trouble adjusting to high school initialy, they did enter with high expectations of challenging work (Boyd). It was also revealed through a library use survey, that gifted students tended to be avid readers who viewed less television than non-gifted students.

CONCLUSIONS

While program examples were not as abundant at the secondary level as they were at the elementary (Feldhusen) research has been done in enough areas to warrent the implementation of several services for gifted students at the secondary level. Acceleration appeared to be proven effective (Stanley, Kulik, Karnes, Janos) along with independent study (Reis, Atamian & Renzulli, Lodato) and mentor programs (Bova & Phillips, Shamanoff). If as Feldhusen (1986) contended, gifted programs should be multi-service in nature, then these options seemed to be appropriate, as well as flexible enough to adapt to small, rural communities with their special needs and problems (Yoder). If consideration was given to a certain school's curriculum and gifted population's needs, a program tailored to that specific school could be achieved.

RECOMMENDATIONS

1. School personnel should seek community involvment to ensure support.
2. Teachers should use acceleration to fit pace to the student's ability.
3. Staff should use independent study for individualizing curriculum or when small numbers do not warrent a class.
4. Administators should assign teachers to gifted classes who feel most comfortable acting in the role of facilitators of learning.

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BACKGROUND

Name:	Donna S. Moore RR 1 Box 391 Walkerton, IN 46574 (219) 586-3857	
Education:	Ball State University Muncie, IN	B.S. in Secondary Education Major: English Minor: Reading
	Indiana University South Bend, IN	30 hours toward an M.S. in Secondary Education
Experience:	Oregon-Davis Jr./Sr. High School Hamlet, IN 46532	Seven years: three years-remedial English, four years of 7th-12th grade English, including one year of accelerated 9th grade English.
Qualifications:	Purdue University & Earlham College	Five hours in Gifted Education
	Oregon-Davis Jr./Sr. High school	One year teaching accelerated English
	Oregon-Davis School Corporation	Two years on the broad-based planning committee for K-12 Gifted and Talented Program

Reasons for Study:

1. To gather research to assist in implementing an appropriate G/T program at a small-rural secondary school

2. To improve the existing accelerated courses